THE SOURCE

NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM
ON THE WEB AT *WWW.DES.NH.GOV/DWSPP*

SPRING 2006

Current Testing of Private Wells May Not Ensure Safety

Water quality testing of private wells in New Hampshire is mainly voluntary. This means that more than one third (480,000) of New Hampshire residents could be receiving their water from untested or inadequately tested private wells. With a significant percentage of private wells having high arsenic or radon levels due to bedrock characteristics, this lack of testing is a concern. A U.S. Geological Survey (USGS) review of statewide private bedrock well data from the DES Laboratory indicates that 21 percent of those samples exceed the 10 ppb limit for arsenic and two percent exceed the 4 ppm limit for fluoride. The USGS study also found that 96 percent of samples exceed 300 picocuries per liter of radon, proposed by the US Environmental Protection Agency (EPA) as the level at which actions should be taken to reduce exposure. In addition to these contaminants, both naturally occurring substances (e.g., uranium and bacteria) and human-caused contaminants (e.g., MtBE and other volatile organic compounds) are present at concentrations above health standards in smaller numbers of wells.

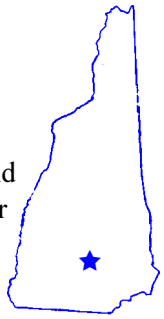
New Hampshire has no private well water quality testing requirements, and it appears that few towns require testing. A questionnaire sent to town officials statewide in 2003 indicated that 49 towns had some sort of water quality testing requirement for new private wells, up from 37 towns that reported having such a testing requirement in a 1997 survey. However, follow-up calls made by DES in 2006 to the 49 towns that answered yes in the 2003 survey found only five towns that have specific ordinances requiring testing and analyses. All of the other towns cited the 2000 International Plumbing Code, adopted by the New Hampshire Plumbers Board, which mandates that only potable water supplies may be hooked up to plumbing.

Given the Plumbing Code requirement, one might expect that all new private wells receive a comprehensive analysis to guarantee a safe water supply, but this is not the case. While most new wells are associated with new homes and many towns require proof of water analysis for issuance of an occupancy permit, there is no assurance that the full range of health-based contaminants are analyzed. According to the local officials surveyed by DES, actual water quality tests for new wells range from thorough to minimal. In the end it is left up to the town official to interpret the code and decide whether water passes as potable.

According to the N.H. Plumbers Board, the intended interpretation of the code is that water be tested by a certified laboratory in accordance with the Safe Drinking Water Act (SDWA). A complete SDWA-compatible analysis (such as for a public water system) for all of the contaminants listed in the National Primary Drinking Water Standards would be very costly. To this end, the DES Laboratory has formulated a "Standard Analysis," which covers the contaminants that occur most frequently, offering a cost-effective and reasonable overview of a well's quality. The DES Standard Analysis includes arsenic, bacteria, chloride, copper, fluoride, hardness, iron, lead, manganese, nitrate, nitrite, pH, and sodium. DES recommends that homeowners have their well water tested for these contaminants, plus radon, uranium, and gross alpha, by a certified laboratory every three to five years. DES also recommends testing for volatile organic compounds (VOCs) every five to ten years.

Finally, DES recommends that local officials responsible for issuing occupancy permits take note of DES's testing recommendations when assessing the potability of well water. More information on private well testing is available at www.des.nh.gov/well_testing.htm or by calling (603) 271-0657.

Spotlight on ... Bow



Bow completed a source water protection plan last December with the assistance of Granite State Rural Water Association. The process began last spring when the town's Board of Selectmen appointed a ten-member Drinking Water Protection Committee. Bow is a rapidly growing suburban community just south of Concord, along I-93. Bow is served by a combination of private wells and 32 small public water systems, and is in the process of developing a municipal water system.

The Drinking Water Protection Committee utilized DES's Source Water Assessment data (online at www.des.nh.gov/dwspp/reports.htm) to begin the process of identifying threats to the town's water supplies. This process yielded five general categories of concerns: (1) residential development, (2) transportation corridors, (3) commercial, industrial and municipal land use, (4) the lack of water resources protection, and (5) stormwater runoff. The Committee then developed specific strategies to provide additional source water protection. These strategies include:

- Establishing Bow's town and school water systems as models for source protection.
- Preparing a septic system ordinance for adoption at the 2007 Town Meeting.
- Extending water service to areas in Bow where groundwater contamination is present or where source water protection is not practical.
- Mapping stormwater infrastructure and discharge points with a global positioning system and developing a comprehensive stormwater management program.
- Collaborating with fuel oil distributors and oil burner service companies to promote better residential fuel storage and maintenance of tanks. Activities could include education and outreach to consumers and development of a free inspection program.

According to Bill Klubben, director of Bow's planning department, "The SWP Planning process reminded us how critical safe, dependable drinking water is to the life of the community." The Committee has been reappointed for another year to work on implementing the plan. For more information, please contact Bill Klubben at (603) 225- 3008.

Guest Articles in *The Source*

Don't forget! The Drinking Water Source Protection Program invites outside authors to submit source protection articles for this newsletter. To view our "Guidelines for Guest Articles" visit www.des.nh.gov/dwspp/Source/Guidelines.pdf.

Source Water Grant Recipients

A total of 24 proposals were received and reviewed for the 2006 Local Source Water Protection Grant Program. Half of the proposals were for source security projects. Nineteen projects will be funded for a total of over $203,000. Some of the projects this year include installing fencing around drinking water supplies, developing town wide source protection plans and constructing a horse manure storage facility within the Exeter River watershed. Please note the 2007 grant applications will be available earlier this year, in late May, with a due date of November 1, 2006 ,which is a month earlier than in previous years.

The Source, the quarterly newsletter of DES's Drinking Water Source Protection Program, is published by:

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095
(603) 271-3503

Commissioner	Michael P. Nolin
Asst. Commissioner	Michael J. Walls
Division Director	Harry T. Stewart
Bureau Administrator	Sarah Pillsbury
Program Manager	Brandon Kernen
Editors	Paul Susca, Jessica Brock

Printed on Recycled Paper

To subscribe contact Jessica Brock at (603) 271-4071
www.des.nh.gov/dwspp

A Free Tool for Risks of Microbial Contamination

According to the Centers for Disease Control, from 2001 to 2002 a total of 31 waterborne disease outbreaks associated with drinking water were reported in 19 states. Conventional treatment including chlorination is highly effective against most bacteria, viruses, and protozoa. However, chlorine resistant microbes such as *Cryptosporidium* and *Giardia* or mechanical failures can result in an outbreak of a waterborne disease. A new computer-based tool is now available for water system managers to use to evaluate the risks of microbial contamination.

The *Microbial Risk Assessment Tool*, developed by the Water Center at the University of Montana, is an interactive desktop program designed to help water system managers evaluate their systems' current risk of microbial contamination. The tool contains two parts: a survey and a ranking tool that utilizes Microsoft Excel. The survey contains questions about water system components (i.e. source water, treatment, pumping and storage, and distribution) and the answers produce a numerical score indicating potential microbial risks for each component. The interactive features of the program are very instructive and simplify using the program.

For water systems looking for an organized way to rank microbial risk and build support for financial or management resources, this tool may be of use. Individual program CDs are distributed free of charge. To order the program call (800) 624-8301 or (304) 293-4191 and refer to product # DWCDTR21, or download the program from water.montana.edu/training/mr/default.htm.

Readopton of Rules

The Water Supply Engineering Bureau readopted 11 rules in November 2005, among them:

- Env-Ws 386 Protecting the Purity of Protected Watersheds; and
- Env-Ws 393 Public Water Supply Grants.

To obtain a copy of these rules, please visit www.des.nh.gov/RuleMaking. If you would like to be notified of new rulemakings, please contact Debra Songderegger at (603) 271-2862 or by e-mail dsonderegger@des.state.nh.us.

Upcoming Events

- Attention planners! The Office of Energy and Planning puts together Planning and Zoning Conferences every fall and spring. Please visit www.nh.gov/oep for more information.

- On April 22 from 9 a.m. to 3 p.m. the Green Mountain Conservation Group will hold a Ground Water Protection Conference at Cody Education Center in Freedom. The event will feature a series of discussions by state, regional planning and local officials concerning current legislation, a discussion of hydrogeology and geologic state information and local groundwater protection measures. Contact Blair Folts of the Green Mountain Conservation Group at (603) 539-1859 or visit www.gmcg.org.

- On May 9 the New Hampshire Drinking Water Week Coalition will host the 14th Annual Drinking Water Week Festival. The event will be held at the Keene Recreational Center in Keene from 9 a.m. to 2 p.m. Fourth and fifth graders from Keene and the surrounding communitities will attend. The event is open to the public free of charge, and held rain or shine. For more information about the event, or if your organization would like participate at the event, please contact Jessica Brock at (603) 271-4071 or jbrock@des.state.nh.us or visit www.des.nh.gov/wseb/waterfest.

- On May 18 DES's Source Water Protection Workshop will be held at the DES auditorium from 9 a.m. to 3p.m. Last year 150 local officials, water suppliers, and consultants attended this event. This year's workshop will feature the work from leading consultants, university researchers, and state/regional/local officials involved in water supply protection. Visit www.des.nh.gov/dwspp for an online agenda and registration, or contact Pierce Rigrod at (603) 271-0688 or prigrod@des.state.nh.us.

- The calendar for the 2006 New England Water Works Association training for water supply professionals has been posted at www.newwa.org.

- The UNH T2 program has posted its training classes for the Road Scholars Program at www.t2.unh.edu/training. The training includes courses on drainage, erosion controls, and much more.

Bumper Crop of Groundwater and Drinking Water Legislation

Eleven bills dealing with groundwater or drinking water have been introduced during the 2006 session of the New Hampshire Legislature, eight dealing with groundwater and bottled water, and three addressing surface water.

Several of the groundwater bills would alter the permitting process for large groundwater withdrawals. HB 1494 and SB 386 would expand the role of municipalities; the latter would also change the appeal process and charge DES with protecting the public trust. HB 1609 would require that the water resources portion of a municipal master plan be considered as part of the impact study now required for large groundwater withdrawals. HB 1541 would require applicants to comply with local ordinances *before* obtaining a permit from DES. HB 1462 and SB 326 would place a moratorium on large groundwater withdrawal permits until the legislative Groundwater Commission issues its report on water supply needs, due in 2008; SB 326, however was defeated in committee. HB 1493 would declare that groundwater is part of the public trust.

HB 1737 would establish a per-container fee on beverages to support the Land and Community Heritage Investment Program (LCHIP), the dam maintenance fund, drinking water and water resources programs, and the in-stream flow protection program.

Two bills would establish protective buffers for surface water supply sources. HB 1289 would protect Pennichuck Brook and its tributaries, while HB 1395 would protect all surface water sources and their tributaries.

For the current status of any bill, visit www.gencourt.state.nh.us/ie/billstatus/quickbill.html.

Land Grant Offers Another Round

The Water Supply Land Grant Program has helped protect over 3,300 acres of land. The land varies widely from a 39-acre conservation easement in Dover to a 1,355-acre conservation easement in Barrington. Outright purchases vary from a 46-acre parcel in Hollis to a 295-acre piece of land in Nashua.

In Spring 2005, $587,000 was granted to four municipalities to conserve land around their water supplies. In February 2006, $1 million was granted to six municipalities. Another grant round will start in the fall of 2006 for $1.5 million.

For more information, please contact Karla McManus at (603) 271-3114 or kmcmanus@des.state.nh.us or visit www.des.nh.gov/dwspp/acqui.htm.

29 Hazen Drive, Concord, NH 03301
Drinking Water Source Protection Program
NEW HAMPSHIRE DEPARTMENT OF Environmental Services

PRSRT STD
U.S. Postage
PAID
Concord, NH
Permit #1478